CLAIMS

1. (withdrawn) An ultra-wideband communication method, the method comprising the steps of:

determining a radio frequency band for communication;

mapping any electromagnetic signals present in the determined radio frequency band; and

transmitting a plurality of ultra-wideband pulses in the determined radio frequency band.

2. (withdrawn) The method of claim 1, wherein the step of mapping electromagnetic signals comprises analyzing any electromagnetic signals present in the determined radio frequency band.

3. (withdrawn) The method of claim 1, further comprising the step of transmitting a plurality of ultra-wideband pulses in another radio frequency band if transmitting in the determined radio frequency band would cause substantial interference to any electromagnetic signals present in the determined radio frequency band.

4. (withdrawn) The method of claim 1, wherein the determined radio frequency band may range from about 1 gigahertz to about 10 gigahertz.

5. (withdrawn) The method of claim 1, wherein each of the plurality of ultra-wideband pulses has duration that ranges from about ten picoseconds to about one millisecond.

6. (withdrawn) A ultra-wideband communication method, the method comprising the steps of:

means for determining a radio frequency band for communication;

means for mapping any electromagnetic signals present in the determined radio frequency band; and

means for transmitting a plurality of ultra-wideband pulses in the determined radio frequency band.

7. (original) An ultra-wideband communication method, the method comprising the steps of:

generating a first data frame, constructed to transmit data at a first data rate;

generating a second data frame, constructed to transmit data at a second data rate; and

transmitting both the first and second data frames in a pseudo-random method.

8. (original) The method of claim 7, wherein the pseudo-random method comprises transmitting the first and second data frames so as to substantially avoid generating a spectral line.

9. (original) The method of claim 7, wherein the pseudo-random method comprises transmitting the first and second data frames by using a pseudo-random timing sequence.

10. (original) The method of claim 7, wherein the first and second data frames each comprise a plurality of time bins, with each time bin capable of receiving an ultra-wideband pulse.

11. (original) The method of claim 7, wherein the first data frame transmits data at a rate that ranges between about one kilobit per second to about five megabits per second.

12. (original) The method of claim 7, wherein the second data frame transmits data at a rate that ranges between about five megabits per second to about one gigabit per second.

13. (original) The method of claim 7, wherein the second data frame transmits data at a rate selected from a group consisting of: a 25 megabit per second rate, a 50 megabit per second rate, a 100 megabit per second rate, a 200 megabit per second rate, a 400 megabit per second rate, a 480 megabit per second rate, a 500 megabit per second rate, and a one gigabit per second rate.

14. (original) The method of claim 7, wherein the first and second data frames each comprise a time duration that may range from about one microsecond to about one millisecond.

15. (original) The method of claim 7, wherein the first and second data frames each comprise a plurality of time bins, with each time bin capable of receiving an ultra-

wideband pulse, wherein the ultra-wideband pulse may range in duration from about 10 picoseconds to about one nanosecond.

16. (original) An ultra-wideband communication method, the method comprising the steps of:

means for generating a first data frame, constructed to transmit data at a first data rate;

means for generating a second data frame, constructed to transmit data at a second data rate; and

means for transmitting both the first and second data frames in a pseudo-random method.

17. (original) An ultra-wideband communication device, comprising:

a transceiver structured to communicate at a first data rate; and

a transmitter structured to transmit at a second data rate that is greater than the first data rate.

18. (original) The ultra-wideband communication device of claim 17, wherein the transceiver communicates by receiving and transmitting at the first data rate, and the transmitter transmits at the second data rate.

19. (original) The ultra-wideband communication device of claim 17, wherein the first data rate transmits data at a rate that ranges between about 1 kilobit per second to about 5 megabits per second.

20. (original) The ultra-wideband communication device of claim 17, wherein the second data rate transmits data at a rate that ranges between about 5 megabits per second to about 1 gigabit per second.